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Indian Standard

METHOD FOR PREPARING TEST SPECIMENS FROM FABRIC SAMPLES FOR PHYSICAL TESTS

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MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
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Indian Standard

METHOD FOR PREPARING TEST SPECIMENS FROM FABRIC SAMPLES FOR PHYSICAL TESTS

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Indian Standard

METHOD FOR PREPARING TEST SPECIMENS FROM FABRIC SAMPLES FOR PHYSICAL TESTS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 7 July 1972, after the draft finalized by the Physical Methods of Test Sectional Committee had been approved by the Textile Division Council.

0.2 For the test results to be reproducible and to have a meaningful interpretation, use of a proper method for preparing test specimens from the laboratory samples is as important as that of a proper method for drawing representative samples from the lot and a proper method of test. This method is based on the practices prevailing in the textile industry.

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1. SCOPE

1.1 This standard prescribes method for preparing test specimens from fabric samples for the purpose of testing various physical characteristics.

1.1.1 This standard is applicable to all types of fabrics, namely, woven, knitted, felted and nonwoven, made from any type of fibre.

2. TERMINOLOGY

2.0 For the purpose of this standard, the following definitions shall apply.

2.1 Test Sample — A representative sample drawn from a lot for the purpose of preparing test specimens for testing.

2.2 Test Specimen — A specific portion of a test sample upon which a single test is performed or which is selected for that purpose.

3. PROCEDURE

3.1 Woven Fabrics

3.1.1 Take one of the test samples drawn for the purpose of preparing test specimens, mark the warp and weft direction and lay it flat on the

surface of a smooth table. Remove any wrinkles or folds in the sample by hand without unduly stretching it.

3.1.2 Mark the required number of warpway and weftway test specimens of the required size from different portions of the sample under test. The length directions of the warpway and weftway test specimens shall be parallel to the warp and weft directions of the sample respectively. The specimens marked in each direction shall be scattered throughout the area of the sample (*see* Fig. 1A) in such a way that:

a) no two warpway specimens contain the same set of warp yarns, and

b) no two weftway specimens contain the same set of weft yarns.

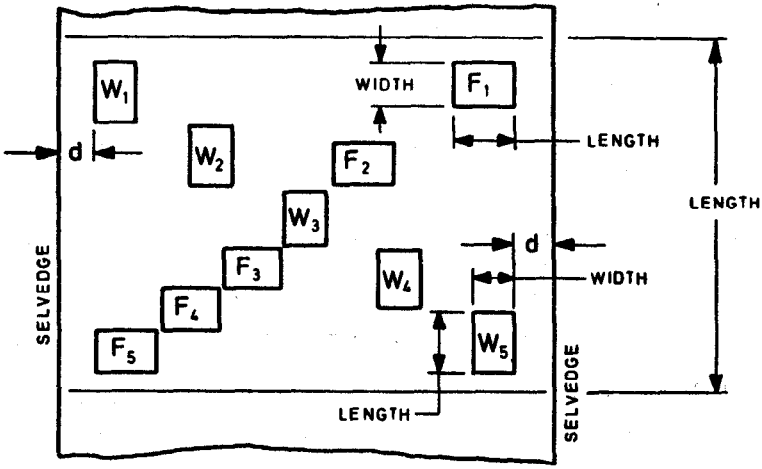
3.1.2.1 However, in case it is not possible to have different sets of warp or weft yarns for different specimens, a portion of the warp or weft yarns taken in one specimen may be allowed to form a part of the other (*see* Fig. 1B).

3.1.2.2 The number of test specimens to be drawn and the size of each specimen depends on the characteristic to be tested and shall be as laid down in the specification for the material or the method of test to be followed. In case there are more than one test sample for drawing test specimens, draw approximately equal number of specimens from each test sample to make up the total number of test specimens.

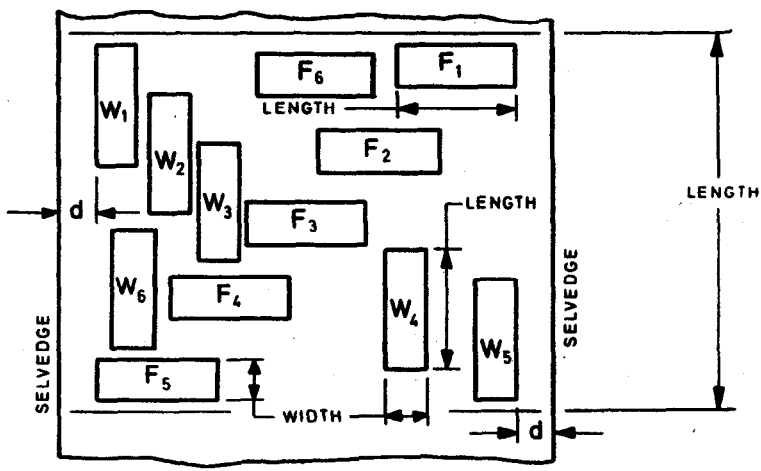
3.1.2.3 Avoid taking test specimens from the portions having wrinkles, folds or defects. Do not take any specimen within one-tenth of the fabric width from the selvedge. Mark the warpway and weftway test specimens with the letters 'W' and 'F' respectively for the purpose of identification.

3.1.3 Cut with the help of a sharp razor or a pair of scissors the test specimens along the markings and collect the warpway and weftway specimens separately.

3.2 Other Fabrics — In the case of knitted, felted and nonwoven fabrics, the length and width directions should be treated as warp and weft directions respectively as in the case of woven fabrics and the test specimens prepared as above.



1A TEST SPECIMENS WITHOUT COMMON YARNS (OR PORTIONS)



1B TEST SPECIMENS WITH COMMON YARNS (OR PORTIONS)

W = warpway test specimen

F = weftway test specimen

NOTE — Distance *d* shall be not less than one-tenth of fabric width.

FIG. 1 LAYOUT OF TEST SPECIMENS

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ON

PHYSICAL METHODS OF TEST FOR FABRICS

IS:

1954-1969 Methods for determination of length and width of fabrics (*first revision*)

1963-1969 Methods for determination of threads per decimeter in woven fabrics (*first revision*)

1964-1970 Methods for determination of weight per square metre and weight per linear metre of fabrics (*first revision*)

1966-1961 Methods for determination of bursting strength of woven and knitted fabrics

1969-1968 Method for determination of breaking load and elongation at break of woven textile fabrics (*first revision*)

2387-1969 Methods for determination of weight of jute fabrics (*first revision*)

2702-1965 Method for determination of thermal resistance of textile fabrics, guarded hot-plate method

3442-1966 Method for determination of crimp and count of yarn removed from fabrics

4681-1968 Method for determination of wrinkle recovery of fabrics (by measuring crease recovery angle)

4910- Methods of test for tyre yarns, cords and tyre cord fabrics made from man-made fibres:

- 4910 (Part I)-1968 Linear density
- 4910 (Part II)-1968 Breaking load, elongation at break and tenacity
- 4910 (Part III)-1969 Dip pick up
- 4910 (Part IV)-1970 Heat shrinkage and heat shrinkage force
- 4910 (Part V)-1969 Wet contraction and wet contractile force
- 4910 (Part VI)-1970 Definition of terms
- 4910 (Part VII)-1971 Heat degradation
- 4910 (Part VIII)-1970 Thickness (gauge)
- 4910 (Part X)-1971 Growth

6359-1971 Method for conditioning of textiles

6490-1971 Method for determination of stiffness of fabrics—Cantilever test

6668-1972 Method for preparing test specimens from fabric samples for physical tests

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